THE VETERINARY RECORD

A Weekly Journal for the Profession.

Edited by WILLIAM HUNTING, F.R.C.V.S.

No. 874. APRIL 8, 1905. VOL. XVII

ELECTION OF COUNCIL.

Next month the voting papers will be sent to every M.R.C.V.S. who has taken the trouble to have his name and address correctly printed in the official Register. It is very curious how some men neglect this statutory obligation. Is it that they are too ignorant to know their professional privileges depend upon correct registration or that they are too apathetic to care whether they are registered or not?

No very acute controversial subject is now before the profession, and this year's election will probably be a very quiet affair. There are eight retiring members, all of whom are eligible for re-election and probably safe in their seats. They are:

F. W. Wragg	J. H. Carter
W. Shipley	W. O. Williams
McI. McCall	W. J. Mulvey
J. McKinna	E. S. Shave.

Doubtless there will be, before the voting papers are sent out, a few nominations of fresh men, but unless they are unusually prominent and eminent the old members are not likely to be displaced. Thanks to the efforts of the local veterinary societies our Council is now quite representative of the profession. On a governing body we require business aptitude more than eloquence, and a common sense which knows how to follow a leader when the merits of a subject are beyond our grasp.

DRUSE STREPTOCOCCEN SERUM.

A correspondent sends us a circular in English but apparently printed in Germany which is misleading. It professes to refer to "a serum to kill glanders bacilli." It tells us "there are a great number of different kinds of glanders bacilli" and then asserts "our glanders serum is prepared from a great number of different kinds of various species extracted from the actual agent of the disease specially bred on trial animals." The translator from the German has clearly made a serious mistake, and by "glanders" means "strangles." This is more than a printer's error and needs correction, especially in this country where the curative treatment of glanders is illegal.

"CONCLUSIVE EVIDENCE."

In a communication on a prosecution for sheep-scab, Mr. Wynne reminds us that it was decided about a year since at Denbighshire Quarter Sessions that the "certificate of a veterinary inspector shall be conclusive evidence of the disease certified." It is curious that this point should be frequently overlooked in courts of first instance. Of course evidence against the inspector's certificate may be given, and the magistrates cannot be prevented from taking it into consideration when deciding the case—they might convict and fine defendant one penny.

To advise a client to fight a case against a veterinary inspector is to put him into a very dangerous position. Such matters should be left to a solicitor. Some years ago an owner of sheep in Ireland was prosecuted for removing them whilst suffering from scab, in opposition to the orders of a veterinary inspector. A number of professional witnesses gave evidence that the sheep were not suffering from scab, and the magistrates dismissed the case. An appeal was taken by the Authorities, and the higher court sent the case back to the magistrates to convict.

The cost of the appeal would be ten times the value of the sheep, so that it is costly to win on a question of whether a disease exists or not when the inspector says it does.

Section 44 of the Diseases of Animals Act, 1894, clause 5, runs—"A certificate of a Veterinary Inspector to the effect that an animal is or was affected with a disease specified in the certificate shall for the purposes of this Act be conclusive evidence in all Courts of Justice of the matter certified."

In the Irish case, if we remember rightly, counsel for the defendant remarked that no man could be infallible, and such a clause gave Inspectors power to do as they liked. The Judge replied that the powers were confined to the scheduled diseases *for the purposes of this Act*. From which we gathered that although the Inspector's certificate would always support a prosecution for an offence against the Act, it might be wrong, and if proved wrong the Inspector or his employers would be liable to a civil action for damages.

The reason for the clause is very evident—without it movement of animals or their slaughter might be dangerously delayed while the question of diagnosis was being decided. If the stamping out of an outbreak of cattle plague were delayed for a week whilst a dispute as to its nature was settled, the loss to the country might be inestimable. If the diagnosis were wrong payment could be made for the error.

PARASITIC MANGE.

A man was fined £50 in Dublin for not notifying the existence of parasitic mange among his horses. The penalty seems shamefully excessive. In by far the larger portion of Great Britain, having mange among horses is not looked upon as an offence by the Government. The amount of the fine can only be accounted for by the magistrate's profound ignorance of the disease. The learned man said—"the action of the defendant might have had the most far reaching and serious effects. The offence was in truth of the utmost gravity." Ridiculous nonsense!

"Careful observation makes a skilful practitioner but his skill dies with him. By recording his observations he adds to the knowledge of his profession, and assists by his facts in building up the solid edifice of Pathological Science."

ESCAPE OF INTESTINE AFTER OPERATION—RECOVERY.

On Friday, the 24th March, Mr. Maller, V.S., and myself operated upon a horse with scirrhous cord, weighing some 5lb. The animal was under chloroform for more than an hour, as the adhesions were difficult to break down. He lost a considerable quantity of blood which had possibly a bearing on the future of the case.

On rising from the ground, a knuckle of intestine showed. The order was instantly given to get the hobbles on again, but before this could be accomplished as much bowel had escaped as would fill an ordinary bucket. I supported the extruded gut with hands dipped in an antiseptic (and received a pretty hard kick in the thigh) while my friend was attending to the head and superintending the casting. Having secured the animal on his back, we succeeded in returning the bowel, but feared the presence of some foreign substance as there was straw for a bed. A roll of lint saturated in a strong solution of boracic acid was pushed up as far as possible, and the operation wound first sutured closely, and then an aluminium clamp placed over all. The animal was now very low with twice chloroforming, besides the loss of blood previously referred to, and was allowed to remain on the ground a short time. He presently rose, walked to the stable, showing the usual signs of shock which accompany hernia, lay down and remained quietly for a few minutes, rose again, and from that time made an uneventful recovery. The pad of lint was removed on the third day and frequent use made of antiseptics. The temperature never exceeded 103° and only reached that degree for a few hours.

The reason for recording this case is that neither of us in a long professional experience have ever seen a case of the kind recover, and think this may be unique. We have of course seen many instances in pigs, bitches, cats, and capons, where the return of the gut has been commonly followed by no grave symptoms. On several occasions I have attempted to save impaled colts and "horned" horses with bowel extruding, but there have always been fatal lesions, or the subjects have died of peritonitis. If this rough outline should draw some record of cases by more advanced practitioners we should be greatly interested to read them in your valuable journal.

HAROLD LEENEY, M.R.C.V.S.

ABSTRACTS FROM FOREIGN JOURNALS.

MULE WITH SPLIT HOOFS.—By N. DOBREFF, of Philippopoli, Municipal Veterinary Snrgeon.

I have seen the interesting animal which has been photographed on the spot in the cattle market of Philippopoli. From its owner, a gipsy, particulars as to its descent were not obtainable. Probably the mule came from the Rodo Mountains

where mule rearing is very prevalent. The animal was about 10 months old and quite normal, with the exception of the fore feet. The hoofs are split resembling the claws of cattle not quite fully grown.

The hind feet are normal as can be seen by the photograph. A closer examination was not convenient.—Ex. *Berliner Thierärzt Woch.* G. M.

VACCINES AND ANTISEPTICS.

Ossipoa, a Russian V.S., found that his anti-anthrax vaccinations, conducted under strictly antiseptic conditions, failed to give immunity for any length of time, so he tried a series without these conditions and found the immunity conferred lasted much longer if ordinary cleanliness was observed in the operation. So he concluded that the antiseptics had destroyed the active principle of the antitoxin.—*Wiestnik Obscht.*

[This seems to be common sense and to explain many failures.—F. E. P.]

COMMINUTED FRACTURE OF THE SEVENTH CERVICAL VERTEBRA IN A MARE.—By MM. G. PETIT et DESOVBRY, at the sitting of the Soc. Cent. de Méd. Vét., Paris, Feb. 25.

Our literature does not appear to be overburdened with observations on the fracture of cervical vertebræ inthe horse. We find noted everywhere fracture of the articular apophyses, most frequently in connection with the grave cases, irreducible and fatal, of twist or rather luxation of the neck.

We have found in the *Journ. de Méd. Vét. Militaire*, 1873, an excellent narration by Wiart of a case of comminuted fracture of the seventh cervical vertebra, caused by a fall in a stable, and fatal in 42 hours. The vertebra was broken in five pieces, and it produced among other disorders laceration of the marrcw and intrarachidian extravasation of blood, demonstrated by the existence of a long clot in the cavity of the arachnoid.

The observation that we have the honour to bring before the Society is also very interesting; it refers to a fracture of the posterior extremity of the body of the seventh cervical vertebra, involving the articular cavity, with complete detachment of a transverse apophysis. Viewing the vertebra from behind and slightly inclined it is seen that the principal line of fracture runs obliquely, and divides the articular cavity in two nearly equal portions. Further, it connects with the fracture which loosens the right transverse apophysis at its base. Thus there are two nearly equal fragments movable (I & II): at the junction of these two fragments is a small surface of fracture covered with splinters. A second line of fracture involves the articular cavity and runs through to the floor of the cervical canal. The articular cavity is thus in fact divided into three parts, only one of which is completely detached, like the corresponding transverse process. The smaller portion, comprised between the two fractures has the edges completely crushed and splintered. The vertebral canal was intact, but the autopsy was too hurried, and we are unable to say how much or how little the spinal marrow was damaged by the fracture.

In the first dorsal vertebra there was nothing to be noticed but the fracture of the anterior border of the spiny process at its lower extremity, extending to a height of 4 centimetres and width of 1½ c. This is probably the result of violent contact with the right posterior articular apophysis of the luxated seventh cervical.

The circumstances of the accident were curious. A mare of pure blood belonging to a large breeding establishment was put in a meadow with a specially mutilated stallion. [Photographs exhibited showed that the penis is turned back, and hangs between the thighs and behind the testicles.] The operation to produce this condition has no injurious effect. It is of American origin, and we cannot deny its ingenuity; erection and even ejaculation are still possible. Left in a paddock with several mares he provokes an earlier appearance of œstrum; and experience shows that certain females which are difficult to excite are completely modified after a relatively short sojourn in a meadow with one of these stallions.

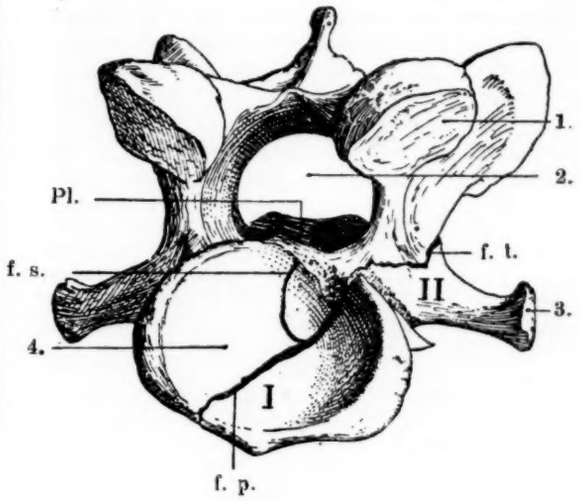

Fig. A.—(Posterior view, slightly sloped.).

1. Posterior articular apophysis. 2. Vertebral Canal. Pl.—Floor of the canal. 3. Transverse apophysis. 4 Articular cavity. 5. Secondary line of fracture. f. p.—Principal line of fracture. f. t.—Line of fracture involving the base of transverse apophysis.
I. & II. Movable fragments.

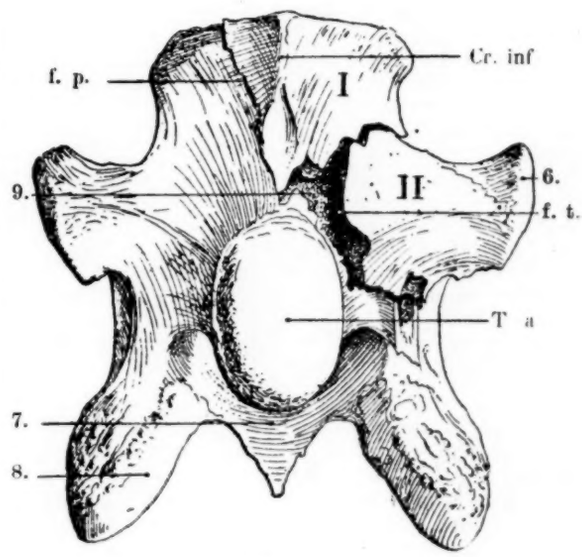

Fig. B.
(Vertebra resting on anterior apophyses: under surface).

6. Transverse apophysis. 7. Vault of Vertebral canal (anterior extremity). 8. Anterior articular apophysis. 9. Splintered surface. T.a.—Articular head. Cr. inf.—Inferior crest of body. f. t., f. p. Lines of fracture.

The mare which is the subject of our note decidedly rebelled against the attacks of this stallion, and responded to his advances by lashing out energetically, and so that one of her feet caught awkwardly on his withers. She fell violently with

the neck completely bent inwards to the right under the thorax. Help was given immediately, but all attempts to get her up were in vain; she succumbed almost at once.

What was the mechanism of death? Was there a rending of the diaphragmatic nerve, with consecutive paralysis of the diaphragm, and rapid death by asphyxia: or did this latter result from violent strain with tearing of the spinal marrow? Our examination was insufficient to establish a definite conclusion.—*Rec. de Méd. Vét., 30 Mars.*

W. H. B.

INDUSTRIAL ANTHRAX.

By T. M. Legge, M.D., Oxon, D.P.H., Cantab.,
His Majesty's Medical Inspector of Factories.

Abstract of "Milroy" lecture delivered before the Royal College of Physicians of London on March 7th, 8th, and 14th, 1905.

(*Concluded from page 623.*)

The characteristic of anthrax specially to infect certain districts has been known for centuries. Long before the bacillus anthracis was discovered as the *causa causans* the epidemiology of anthrax had been studied in many different countries by Hewsinger, especially in Siberia and Germany, with results which led him to the conclusion that the conditions of climate and soil which favoured the development of anthrax in animals were the same as those which favoured the development of malaria in man. In Siberia it was most commonly met with on the salt grass steppes, in the river valleys, and round the bitter lakes. He had noted that its occurrence never failed on land rich in organic matter and liable to putrefaction, such as is found in the impervious peaty moorland soils with tendency to the formation of pools and marshes. The existence of brackish water and generally of water containing alkaline salts which favours decomposition favoured also the development of anthrax. He observed, too, that the use as fodder of the grass or hay of particular meadows or districts was believed to be often the cause of outbreaks. Wilhelm Koch, from consideration of the principal anthrax districts in France (on the banks of the Loire, Oise, Aisne, Saône, the marshy low-lying country of the Gironde, &c.), in Germany (on the banks of the Danube, the swampy sides of the Bavarian Highlands, the valleys of the Elbe, Mulde, Saale, Bode (which are all liable to flood), and elsewhere, concludes that the favouring conditions of soil for the development of the disease as an epizootic are: (1) fairly impervious soils of chalk, marl, or clay; (2) sandy soil, but only when the sand lies in a thin layer on impervious ground and when it is intimately mixed with decomposing animal and vegetable matter; and (3) peaty soils rich in organic and mineral substances, such as prairies, steppes, and moor and marsh land. Height above the level of the sea matters little, but a definite temperature must be reached at which the growth of the bacillus and formation of spores can take place—*i.e.*, between 18° and 40° C. For a typical anthrax district are required only, in addition to the bacillus, a degree of moisture in the soil greater than that of the surrounding country, periodical high temperatures, and profuse vegetation. The moisture must not be so great as to constitute a bog, because the bacillus will not multiply in land thus saturated. As Billings expresses it, "Places liable to be flooded and drying out to a considerable degree in summer and often exposed to the full action of the summer's sun" are those which describe the anthrax district. In America he describes some of the most marked centres as "cups" in high prairie lands, which retain the spring rain but tend to dry out in the summer. The flooding of low-lying lands, followed by drying from great warmth, make certain parts of the valley of the Mississippi markedly anthrax districts. There during the spring and summer of 1895 of a total of 103,507 horses, cattle, sheep, and pigs 6655 were attacked. In the Bavarian Alps in Switzerland Billings further says: "The people know almost to a day how long they dare let cattle graze on the anthrax districts before they must remove them." Factors which must not be left out of consideration, as they form important links in the chain of the creation of anthrax districts, are the insect, bird and animal life and the occurrence of dust storms. Marchoux and Salimbeni have shown, for example, the part played by vultures in South America in the spread of anthrax, first by observing them devour the carcasses of animals which had died from the disease and subsequently finding the bacilli in the excreta.

If we consider for a moment the conditions under which the sheep and animals are reared in Asia, especially in Central Asia, the likelihood for occurrence of anthrax among them is apparent. The central plateau of Asia Minor, the home of the Angora goat, is characterised by a climate of severe winter followed by a sultry summer. A prominent feature of this plateau is the existence of numerous fresh and salt water lakes, such as Lake Van, the brackish waters of which have no outlet. Wool is grown in all parts but the quantity produced is dependent on the character and modes of life of the inhabitants. Most is exported from Mesopotamia, where the nomadic inhabitants have no other occupation than to take care of very numerous flocks of sheep, migrating, with them according to the climate and foraging conditions. These districts are the warmest in Asia Minor and the reason why the wool from the districts of Bagdad and Bassorah is considered of such fine quality is attributed to the fact that the flocks, owing to the mild climate, can pass the winter outside, whereas in the northern mountainous regions the sheep have to be kept under peculiar roofs which are always inadequate to cover the animals which often lie in dirt. Still, the wool from the plains, though of finer quality, contains much more dust than that from the north. Even among the principal family of sheep inhabiting Mesopotamia the character of the wool differs according to the regions whence it comes and various names such as Karadi, Awassi, Mendelli, and Kerkouk are assigned to the qualities. A vast lacustrine region dotted over with lakes or tarns, many of them brackish and with no outlet, or strewn with them like beads on a string, best describes huge districts in Persia, Tibet, Kurdistan, the Kirghiz Steppes, Mongolia, and Northern China, and it is throughout these districts that varieties of the same fat-tailed Persian sheep is found and where the tending of them and of camels, horses, and cattle is the main occupation of the primitive nomadic tribes. Innumerable wild boars haunt the thickets surrounding the salt lakes and swampy delta of the Oxus. and Aral.

The number of recorded instances in which the presence of anthrax bacilli has been demonstrated in impotted material is not large. This must be because search has not often been made. Andrewes has cultivated bacilli from the dust shaken from a few strands taken at random out of a hydraulically packad bale of China hair weighing five hundredweights. Andrew found them in Siberian hair used for brushmaking in an asylum for the blind in Glasgow, and Balfour Stewart in a piece of a Kurachi hide in Liverpool. Other instances are given by Silberschmidt, Gruber, Frank, and Berka in horsehair and by Heim in goat hair. The most important, however, of such experiments are those of Webb and Duncan made at the factory of the former in Worcester. Of eight cases of China mane hair four con

tained anthrax; of four bales of the same material all were infected, as were also both of two samples of dust taken from large bulk quantities. From these experiments they draw the conclusion that all bales of China mane hair must be regarded as infected. Whether further development of bacilli occurs inside a bale after it has been packed has never been determined.

If then the conditions of soil, temperature, moisture, and decomposing vegetable matter play so prominent a part in the development of outbreaks of anthrax among animals it becomes unnecessary to insist that the contagion must invariably be conveyed directly from animal to animal, and from an animal that has died from the disease to man. Dirt and sand adhering to the fleeces of healthy Bagdad sheep and Angora goats may contain spores picked up in anthrax districts. In many outbreaks from manipulation of wool, horsehair, and hides no evidence of a fallen fleece or of damaged material is forthcoming. This view is supported by the fact, well known in the trade, that mane hair is considered much more likely to be infected than tail hair inasmuch as the mane hair comes most in contact with the earth. It explains also most readily the remarkable conclusion of Mr. Webb that it would be unsafe to assume that a single bale of horsehair from China was free from risk. The conditions under which animals are herded together in winter "under roofs always inadequate to cover the numerous animals, as is the custom in Kurdistan, or the shelter given to the sheep in caves by the Bedouins in the villayet of Alleppo might be expected to be much more productive of anthrax once a case occurred than the conditions of soil and temperature described. There is, however, no evidence pointing in this direction.

Several outbreaks of anthrax in animals have been directly traced to spores which have escaped from factories in which raw animal products are dealt with either through pollution of streams or through refuse dust used as manure on fields. Sometimes, however, infection is even more direct. Thus two horses at grass in a field on to which dust from Persian wool used in the manufacture of blankets was blown died from the disease in 1901 in Yorkshire. In a series of outbreaks near Zürich eight out of 22 animals were infected by dust blown from the chimney of a horsehair factory and at least seven other cases were due in one way or another to conditions in this factory. Almost the first recorded outbreak of splenic apoplexy in cattle, as the disease was then called, occurred in the valley of the Yeo in Somerset and the existence of a considerable glove industry at Yeovil suggests that the outbreak had relationship with factory conditions. I mention this outbreak because recently Houston has demonstrated the presence of anthrax (1) in the general effluent from the final catchpit in a hide factory in Yeovil; (2) in the septic tank liquor, the sludge, and the washings of coke from primary and secondary coke beds; and (3) in mud from the banks of the river Yeo and Yeo brook. That the spores of anthrax would, he says, "be swept from the banks in time of flood and carried when present in the mud or river bank down the river to be spread over low-lying land bordering the river hardly admits of any doubt." He guards himself against magnifying the danger thus apparent by saying that "flood water, while widening the potentially infective anthrax area,' might affect so wide a separation of the individual spores of anthrax one from the other as to largely remove the element of danger." The fact that there is no increased incidence of anthrax in the hottest season of the year in this country points to the absence of the peculiar and special conditions of temperature and soil which are necessary for the germination of the spores into bacilli and further multiplication of the latter.

On the corporation sewage farm at Kidderminster since 1897, where incidence on the workers from the use of Persian wool during the same period had been high, there have been 11 outbreaks. An outbreak on the sewage farm at Market Harborough in October, 1904, synchronised with the occurrence of three cases of malignant pustule in men employed at a tannery where previously no case had been known to occur. Illustrative outbreaks of a similar nature have been described by Mr. J. Spear, the one traced to washings of Van mohair, manipulation of which had given rise also to cases of malignant pustule in man, and from the refuse sludge from a tannery in London which was used on the farm of the occupier of the factory. Similar outbreaks are reported from Germany and the United States. Thus, in 1901 15 cattle, and in 1900 23 cattle, were believed to have contracted the disease in Marbach on the Neckar by eating grass infected by the water of a stream used in washing foreign hides. At Kirchhain in Hesse-Nassau, an important tanning centre, in 1901 and previous years several outbreaks in animals had been traced to the use, of hay from meadows manured with the hair and refuse from tanyards. In 1899 on the Black River, Wisconsin, the distribution of the cases along the river bank for a distance of ten miles below a tannery receiving hides from South America and China indicated the river water as the carrier of the virus. The influence of tanneries in spreading anthrax among the operatives and cattle on pastures watered by streams carrying off the refuse from them was made the subject of inquiry in Pennsylvania during 1897. The deaths of 12 men and 60 head of cattle in that year were attributed to the manipulation of Chinese dry hides in the tanneries of that State. While in some cases, therefore, the association of outbreaks of anthrax in animals with factory and workshop conditions is clear, the evidence when closely examined in this country fails to show that incidence of outbreaks of anthrax in cattle is greatest in counties where industries connected with wool or with raw animal products are mostly carried on. Elsewhere I have shown that the number of outbreaks and the number of eattle attacked in each county worked out as a proportion on the number of cattle in each of the counties over a period of five years, negatives so far as can be done by this means, any close association. Indeed, incidence on animals appears to be greatest in counties where danger from factory conditions appears most remote, as, for example, in Cornwall, Westmorland, Northumberland, Hertford, Aberdeen, Banff, Elgin, and Haddington. Incidence of anthrax on animals is twice as great in Scotland as it is in England, yet incidence on the human subject from wool is negligible in Scotland as compared with England. No doubt the direct influence of a particular factory in causing anthrax in animals operates over an extremely limited area, but the use which it is well known is made of refuse dust from wool and horsehair factories as manure is an unknown quantity, and may be the cause of many outbreaks the origin of which cannot be traced. Most cases are rightly attributed to the consumption by cattle of infected fodder either from direct grazing on fields where previously cattle had died from the disease, or from grass which had been cut from places where animals have died, or where the carcases have have been buried at an insufficient depth.

As showing the probable relation of the bacillus to the soil I would cite as instructive the tracing of outbreaks in 1903 and 1902 to the feeding of cattle on turnips grown near the place where an animal suffering from anthrax had been slaughtered, similar feeding on turnips in the digging up of which dead bones were exposed, and of the death of six oxen out of a shed containing 100 animals from consumption of raw potato skins to which the spores of anthrax must have been attached, as only the six oxen thus fed succumbed. But recital of such cases does not explain sufficiently all the outbreaks in animals, particularly those erratic instances occurring on farms hitherto free from the disease.

To account for these M'Fadyean suggests two possible sources: (1) artificial manure and (2) imported feeding stuffs. Against the view that artificial manure can be the cause he states "the erratic way in which outbreaks occur throughout the country apparently quite unconnected with the more or less liberal employment of artificial manure." In analysing 39 consecutive outbreaks, in 29 of which there was no previous history of anthrax on the farm, he found that in 26 of the 39 outbreaks the animals were receiving a diet into which artificial food in different forms entered. He says: "The circumstances connected with the series of outbreaks deepen the suspicion which already existed that a considerable number of cases of the disease in this country have an extraneous source of infection and that the vehicle of infection is not infrequently some artificial food stuff of which the raw material is derived from a foreign country." In one outbreak amongst cattle which caused the death of six valuable shorthorns he isolated the bacillus from linseed cake, and in this instance as soon as the linseed meal was stopped the outbreak ceased. In another outbreak among horses in London similarly the bacillus was isolated from the oats. Of the outbreaks in Germany in 1903 Russian bran was believed to have been the cause in several instances. In 1902 fodder consisting of bran, barley, or hay from Russia is cited as having been believed to be the cause of the outbreaks in seven instances. In 1901, in addition to fodder imported from Russia, reference is made to two farms believed to have been infected from fodder grown in the tropics. This view makes intelligible the source of infection in the case of a corndealer, a person unloading corn in a warehouse, and a person carrying sacks of potatoes mentioned at the beginning of this lecture. If the soil under certain conditions is recognised as a suitable medium for the growth of the bacillus it is no longer necessary always to seek for the material cause in raw animal products alone.—*The Lancet.*

Treatment of External Anthrax.

The treatment of anthrax until recently has either been merely expectant or consisted in cauterisation or other allied treatment of the local pustule. But the use of the serum derived from an immunised animal is coming more and more into use, especially in Italy and South America. Since in external anthrax spontaneous cures are frequent, a consideration of mere case-mortality will not suffice to establish the relative value of the three methods of treatment mentioned. Other points must be considered, such as (1) the relative amount of scarring or of deformity left; (2) the applicability of the form of treatment to the different types assumed by the disease and the stage which it may have reached; and (3) the length of time which elapses from the beginning of the treatment to resumption of employment. The third point is of especial moment in connection with an industrial disease.

Muller has described 13 consecutive cases treated successfully in Jena by rest, fixation, and elevation of the part affected, stimulating diet, and the local application of grey ointment. Ramstedt, from the same clinic, has adduced more recently other seven consecutive cases (one very severe), in which nothing but the same expectant treatment was pursued. And, similarly, Fr. Schultze, of Bonn, has cited a case of extremely severe malignant pustule of the cheek, with extensive œdema of the eyelid, neck, and chest, which was cured after a plastic operation on the eyelid without other operative treatment. Muller, too, considers that the adoption of expectant treatment may be defended on the ground that any operation may facilitate the distribution of the bacilli throughout the system.

Surgical interference usually takes the form of free excision, dissecting out the pustule from the healthy tissues beneath, swabbing the wound out with pure carbolic, and allowing the wound to granulate up from the bottom. Subcutaneous injections of 5 per cent. carbolic acid around the malignant pustule have also been employed. At Guy's Hospital, again, Davies Colley, basing his practice on that of Muskett in South Africa, has, in addition to excision, powdered ipecacuanha on the wound, and given it in 10 gr. doses internally. Muskett in 15 years thus treated 50 cases without fatal issue, using locally ipecacuanha mixed with water into a cream, and did not practice excision. He believed the remedy was a specific. Washbourn found that the powder had the power of destroying anthrax bacilli, but not the spores; in the body sporulation does not take place. This treatment is still most frequently employed at Guy's Hospital. In Russia treatment by injections of carbolic acid has been largely used. Scharnowski has treated in this manner 50 cases, with 2 per cent. of deaths; their severity may be judged from the fact that in 25 the face and neck were affected.

Cauterisation with caustic potash has also been in favour, and Graef has reported 384 cases thus treated by himself and two others, with a mortality of 5 per cent.

It has been already stated that the general mortality to be expected in anthrax is 25 per cent., but for cases treated early and under favourable conditions this is too high. Even, however, in districts where the disease is well known patients commonly defer applying for treatment much too long. Early excision—not later than the fourth day—is good; later on it seems possible to believe that it may promote generalisation of the disease. In some situations, moreover, in which anthrax occurs excision is either impracticable or will necessitate subsequent and sericus plastic operations and prolonged treatment.

Serum Treatment.

Turning now to treatment by anti-anthrax serum, I have examined the details of all the published cases that I can find—67 in number. All but 2 of the cases have been treated in Italy with Sclavo's serum.

Trial in England.

Since July, 1904, serum treatment has been tried in England, either alone or in connection with excision, in 12 cases of external anthrax—not including 1 in which, on the tenth day when the patient was already comatose and bacilli were present in the blood, 30 c.cm. were injected four hours before death. In 4 of these serum alone was used. In No. 1 the pustule was on the malar process, in No. 2 on the forehead, No. 3 on the upper eyelid, and in No. 4 on the forearm. The first two were treated at St. Bartholomew's Hospital. An initial dose of 40 c.cm. sufficed in both cases to arrest further "development of vesicles or other indications of the necrotic process." There was increased œdema, but this was associated with improvement in all other respects. In 1 of the cases no colonies of anthrax could be cultivated nineteen hours after the serum had been injected, although previously the fluid of the vesicles yielded abundant colonies. "Cultures were repeated on the third day, again with negative result. . . . Only a few disintegrating bacilli were found, mostly enclosed in leucocytes." In both cases hardly any scar was left. No. 3 was treated by Dr. Mitchell, of Bradford. The patient was a mill worker. Already by the second day both eyelids were closed with œdema, which extended to the clavicle on the left side, and the right upper and lower eyelids were dark-coloured and appeared as if about to necrose. In four days 100 c.cm. were injected, 20 on the first, 50 on the second, and 30 on the third 10 on the fourth. By the fifth day the œdema had almost all disappeared except such as would readily be

accounted for by the presence of a necrotic area on the left upper and lower eyelids. Although the local symptoms were very severe the general condition of the patient remained good. Case 4 was treated at the Royal Infirmary, Bradford. The type of the disease was described as very malignant, with œdema rapidly extending to the shoulder. He received 140 c.cm. in the course of three days—30 c.cm. intravenously on the morning of the day of death. There appeared to be reaction at first in a rise of temperature to 103.6°F., but the œdema continued to spread; he became insensible, and the diagnosis of meningeal hæmorrhage between the pia mater and arachnoid was made by Dr. Bell. Post-mortem the brain was found to be surrounded with blood between the pia mater and arachnoid and nowhere else.

Six of the 8 cases in which excision was practised as well as serum administered (treated in Guy's Hospital, Bradford Infirmary, Kidderminster Infirmary, and by Dr. Peck, of Queensbury, Bradford) made rapid uninterrupted recovery. In the seventh, treated at the North Stafford Infirmary, excision of the pustule on the hand and incisions into the brawny œdema had been made on the twelfth day of the disease. Administration of serum was commenced twenty-four hours later, when the patient was already in a comatose condition. Death took place twenty-four hours later, there having apparently been no reaction (except diminution of the œdema). In the eighth the pustule was situated on the neck, with rapidly-extending œdema. Two injections only of 10 c cm., at 12 hours' interval, were given. Death occurred within thirty hours.

Its Claims.

The claims as to the effects of serum treatment can be summarised by saying that: (1) In very large doses it is innocuous; (2) it can be well borne even when introduced into the veins; (3) no case taken in an early stage, or of moderate severity, is fatal if treated with serum; (4) with the serum some cases are saved when the condition is most critical and prognosis almost hopeless; (5) when injected into the veins the serum quickly arrests the extension of the œdematous process so as to reduce notably the danger from suffocation which exists in many of the cases where the pustule is situated on the face or neck; (6) the serum, if used early enough, reduces to a minimum the destruction of tissue; (7) in some situations of the pustule, as the eyelid, serum must be used in preference to any other treatment; (8) persons attacked, when treated with the serum, appear to become convalescent in the course of a few hours; to these I may add (9) that in internal anthrax it is administered intravenously the only treatment which can hold out any hope.

In almost all cases injection of the serum is followed by a rise in temperature often to over 105°F., and with this there is an improvement in the general condition of the patient. The prognosis where there is this rise Sclavo regards as favourable. In the same way the necrotic process itself is to be regarded as a sign that the organism is making effort to resist the anthrax infection.

In Italy great value is attached to the treatment. A few facts may emphasise the value and importance attached to the serum treatment in Italy.

In Santa Croce, a small town of about 5,000 inhabitants with 36 tanneries employing 350 workers, and where Dr. Cicognani has adopted the serum treatment exclusively since 1899, the workers now insist on having this treatment to the exclusion of every other, and, since operative treatment is uncalled for, present themselves when there appears the smallest pimple or boil suggesting anthrax.

Recently in Milan I visited the large horsehair factory of Pachetti Brothers, employing some 700 workers. In addition to the steam disinfection of horsehair, a physician attends every morning to treat accidents and slight ailments, keeping careful watch for conditions or appearances suggesting anthrax. His room is fitted up as a bacteriological laboratory for verification of anthrax, a supply of serum is kept, and thus cases in the earliest stages are caught, treated, and recover without cessation of work for more than a day or two. The head of the firm states that he has no fear whatever of the disease among his workpeople, as he has seen so many successes in dealing with it by this method. It was indeed this last piece of information communicated to me a year ago by Mr. Albert Webb, of the firm of Edward Webb and Sons, carpet manufacturers, Worcester, which led me to inquire into the method of treatment.

Its Preparation.

So far I have said nothing of the source of preparation of the anti-anthrax serum by Sclavo, Professor of Hygiene and Principal of the Pathological Institution in the University of Siena. Its origin may be traced back to 1880, when Toussaint first suggested inoculation of animals with attenuated culture as a protection against naturally-acquired anthrax. This led to the elaboration by Pasteur and Chamberland of the method which is now so largely used, especially in France.

The successful efforts made by Behring in obtaining a protective serum against diphtheria, and by Kitasato against tetanus, stimulated inquiry in a similar direction as regards anthrax by Behring, Hankin, Metchnikoff, and Roux.

Marchoux in 1895 first succeeded in immunising actively rabbits and sheep, using Pasteur's vaccines 1 and 2, and then injecting virulent cultures subcutaneously; at first in small and then in greatly-increased doses. And in the same year Sclavo, who had been working at the same subject, was able to assert from his experiments that (1) sheep brought to a high degree of active immunity could furnish a serum active against anthrax; and (2) that this serum showed prophylactic and curative power against anthrax when inoculated into rabbits. He then set to work to find a more powerful serum, and finally obtained from the ass the serum which he now uses. The result is the more curious in that, according to Behring, the strongest antitoxic serums are obtained from animals most susceptible to the organism under experiment; and to anthrax the ass is less susceptible than the goat or sheep.

Even with the ass, however, it is desirable to immunise three or four animals, and to select from among these the one producing the most active serum. In order to expedite the immunising effect, he instituted simultaneous active and passive immunising treatment, and finally succeeded in protecting sheep from anthrax of a very virulent nature, and satisfied himself of the curative properties of the serums by proving that 10 c.cm. administered twenty-four hours after inoculation with with virulent anthrax cultures protected sheep in cases where one of the control animals died three hours and the others fourteen hours later.

He next turned his attention to treatment of malignant pustule in man, and the first case was treated in June, 1897. He desired also to test the effects of his combined active and passive immunising method on large domestic animals—horses, cattle, and sheep; but his application to the Ministry of the Interior to defray the expenses entailed was unsuccessful, and therefore this part of his scheme could not be tried.

I have had the opportunity, through the kindness of Dr. Sclavo, of seeing all the stages in the preparation of the anti-anthrax serum in the Pathological Institute of Siena.

On August 10th, from an ass which had undergone the process of immunisation during a period of two years, about 150 c.cm. of blood was taken from the left jugular

vein. Similar bleeding had been practised on more than fifty previous occasions. On the 13th, the clot having separated, the serum was decanted, and ether was added to the extent of 3 per cent. of the whole bulk.

On the 13th, to test the efficacy of this serum, six rabbits—three to act as control—were inoculated subcutaneously in the abdomen with 0·5 c.cm. of a suspension of a culture of anthrax (grown on agar on August 11th, and kept at 36° to 37° C.). Three of the rabbits received also at the same time 10 c.cm. of the serum injected in one of the auricular veins. All the control animals were dead in thirty-six hours with extensive œdema at the point of inoculation, and anthrax bacilli were found in the blood and tissues post-mortem. The three rabbits which received the 10 c.cm. of serum remained well except for slight induration at the point of inoculation until the 16th, when further opportunity of observing them ceased.

The efficacy of the serum thus having been proved, the serum was then introduced with antiseptic precautions into the 10 c.cm. tubes in which form it is used.

To maintain the immunisation of the ass, on August 14th 10 c.cm. of a culture of anthrax in bouillon containing 2 per cent. gelatine was injected subcutaneously into the right and left side of the neck. This culture was made on the 13th, and was mixed with an old culture prepared in the same way a month previously. The use of gelatine in the fluid injected is believed to prevent the formation of an abscess at the point of inoculation. There was much swelling and tenderness, which had in great part disappeared by the morning of the 16th.

Animals and Anthrax Serums.

Before leaving the subject of the history of serum treatment it is desirable to state what stage has been reached in similar serum treatment of the large domestic animals because its hopefulness here appears to be as great as in case of man. This can be best done by reference to the work of Sobernheim.

His first series of experiments were carried out in 1897 with serum of cattle which had been subjected to Pasteur's treatment, and with the serum of one cow which, after recovery from spontaneous anthrax, had been further treated by Pasteur's method. The result, as far as concerned the production of immunity in rabbits, guinea-pigs, and mice was, he considered, so variable that they were contrary to any idea of specific action of the serum. More satisfactory results were obtained from immunising two sheep—one slowly, the other rapidly—to such a degree that they could stand enormous doses of anthrax cultures without inconvenience. The serum of the one that was rapidly immunised showed remarkable protective properties in retarding a fatal issue in rabbits for from six to eight days, but held out little hope that serum-therapy would be used as a curative agent in anthrax in animals because of the rapidity of the disease.

In a further series of experiments on sheep, however, he obtained more successful results by employing simultaneous inoculation of antianthrax serum and virus, or inoculation of each of them separately within a short interval of time. He used for the virus anthrax cultures of about the strength of Pasteur's second vaccine, believing that with this strength injurious action would not result in the presence of the immunising serum. As a matter of fact, it was found to be non-injurious, and the immunising effect was far greater than that obtained from ordinary serum alone.

Subsequently, to test this combined method of producing immunity, he carried our experiments over a period of two years—1900-2—with the support and encouragement of the Chamber of Agriculture of Saxony. Thirty-three sheep, 18 oxen, and some horses were treated first with attenuated anthrax cultures, and later with highly virulent cultures in increasing doses until a degree of immunity was reached so great that inoculation of enormous quantities of most virulent anthrax could be borne without material ill-effects resulting. The serum and culture were not mixed together, but 5, 10, 15 c.cm. of serum were inoculated into the left side, and immediately after 0·5 to 1 c.cm. of the slightly attenuated anthrax culture into the right. After twelve to fourteen days inoculation with virulent anthrax cultures was made. The results of laboratory experiments were entirely satisfactory, as 10 c.cm. of the serum sufficed to protect, while the control animals died in twenty-four to thirty-six hours. The immunity, too, thus, conferred protected 3 out of 4 sheep from contracting the disease by way of the intestinal tract. Its curative power was also shown in that of 5 sheep inoculated with virulent anthrax and then subcutaneously treated at intervals of from ten minutes to six hours later with 40 c.cm. of the serum, 2 survived, while death was delayed in the others from four to eight days. The control animals were killed in one and a half days. It was necessary to apply the method on a much larger scale in order to determine its general applicability in veterinary practice. Districts in which outbreaks of anthrax were occuring were, therefore, selected, and 2,700 cattle were treated, almost all of them by means of the combined method. No deaths were attributed to the inoculation, and no serious injury to health, even when the animals were only 2 or 3 weeks old. There was a rise of temperature and slight loss of appetite. From the moment the inoculations began cases of anthrax ceased to break out afresh. The immunity produced was lasting, as for a further nine months, up to the time of reporting, in spite of many outbreaks in untreated animals, none of the treated suffered. With larger doses animals already affected with the disease recovered.

Sobernheim feels himself, therefore, in view of these results, justified in speaking of the combined active and passive immunising method as capable of giving powerful and lasting protection, and summarises its advantages over Pasteur's method as follows: (1) That it is free from danger; (2) that it is effective in one day, and has not to be repeated; (3) that a stronger dose and more active cultures are used than is the case with Pasteur's vaccine, and probably a more lasting protection is conferred; (4) that it protects from infection by way of the intestinal tract; and (5) that it can be used for curative purposes. Since then he has carried out his treatment on a large scale in South America, with results which satisfy him as to the value of the process.—*The British Medical Journal.*

NORTH OF ENGLAND VETERINARY MEDICAL ASSOCIATION.

The annual meeting was held at the Douglas Hotel, Newcastle-on-Tyne, on Friday, February 24th, 1905, at 3.30 p m. The following members and others were present: Messrs. W. Hunter (President), and T. S. Hunter, Newcastle; A. Chivas, Corbridge; A. Gofton and N. Irvin, North Shields; W. Lawson, Rothbury; G. Craik, Alnwick; J. B. De Vine, Bedlington; J. R. Dudgeon, Sunderland; Capt. McDougall, A.V.D., Newcastle; Prof. Dewar, Edinburgh; Professor Gilchrist, Newcastle; W. Croudace, Haltwhistle; J. Hunter, Blaiklaw; T. Curry, Gateshead; A. C. Casebourne, R. Brownlee, and E. R. Gibson (hon. sec.), Seaham Harbour.

Apologies for non-attendance were received from Messrs. G. Elphick, J. Ryder, and H. Hunter.

The minutes of previous meeting were taken as read.

Mr. J. Gofton, of North Shields, wrote resigning his membership.

It was proposed by Mr. Chivas, and seconded by Mr.

Hunter, that in view of Mr. Gofton's long connection with the Association, he be asked to reconsider his decision and to allow his name to remain on the roll of members. All those present were unanimous in supporting the proposition.

PRESIDENTIAL ADDRESS.

By W. HUNTER, M.R.C.V.S., Newcastle.

Gentlemen,—I address you this afternoon with considerable diffidence for two reasons—having addressed you so late as last year there may be some repetition, and secondly, as I have told you before, my *forte* is not speech making. First I wish to thank you for the great honour you have done me in unanimously re-electing me your president for the ensuing year. It is not a position to which I have aspired, for I feel more at home sitting amongst you than presiding, but having been chosen your Chairman it will be my earnest desire to emulate the honourable and able men who have held the position I now occupy.

We have had a considerable increase of new members during the past year, but still we have not the attendance at our quarterly meetings which I desire to see, the greater the attendance the better our meetings must be. I think we want more adhesion and union amongst us than we have, and I also think more tradesunionisms. We must combine more than we have done if we mean to uphold the profession and combat the influences and agencies which are tending to limit and lessen our work. We have quackery in every shape and form curtailing our counter practice, and if by discussing this subject we could find some means to decrease the sale of patent medicine we should do the animals, their owners, and ourselves much good. Our work is also assailed by electricity, cycles, and motor cars which have decreased the number of horses in many localities very greatly.

Then we have the Board of Agriculture and Fisheries. Think of the incongruous combination, what has agriculture to do with fisheries? The fisheries of this island home of ours may be, and are I believe, a very important industry and ought to be cultivated for the benefit of the country, but they ought to be under different management, and it might be styled the Marine and Fisheries Department. I cannot understand how it was allowed to tack Fisheries on to the Board of Agriculture and at the same time strike out the Veterinary Department of the Board, the very Department which has done an amount of good to the country which can only be calculated by millions of pounds; have we not stamped out cattle plague, pleuro-pneumonia, foot-and-mouth disease, and rabies, there remains glanders, swine fever, sheep scab, and anthrax, the first three of these can, and I believe will be stamped out, but the fourth, anthrax, will remain. Having accomplished all this our occupation, like Othello's, is gone, and we will get no thanks for it. I would like to see the medical faculty stamp out scarlatina, smallpox, diphtheria, and influenza amongst human beings, and what a blessing it would be to the human race, but it will not happen.

I understand the Board of Agriculture and Fisheries require more information concerning glanders before they can advise the Government to take more active measures than already exist to stamp out the disease. Surely the experience of the veterinary practitioners of London must be ample concerning glanders; they always have it with them, and it is from London that the disease is being continually disseminated over the country. I am sure with the aid of mallein glanders could be stamped out of this country in two years if adequate compensation was given for reactors. And what is adequate compensation? I consider three fourths of the value of a horse which reacts would be sufficient to induce owners to give information to the authorities when the disease exists in their stables, but as it is at present a reactor is sold at all risks, I am here speaking of a reactor which has been found out by the testing of the owner and not by the authorities, and the disease is spread perhaps hundreds of miles. I cannot think the cost to the country would be so very great to stamp out this disease which destroys yearly between 2,000 and 3,000 horses, chiefly in London. An important reason why glanders should be stamped out is that it destroys a number of human beings every year; once contracted by man the disease is incurable.

Look again, gentlemen, at the money that has been spent and wasted by the Board of Agriculture and Fisheries in stamping out swine fever. If local veterinary surgeons had been called in on an outbreak and given authority to act I believe the disease would have been stamped out long ago. But the Board made a dead set against our profession from the first, and would have ignored us altogether if they could; but to get a little information concerning diseases they retain one or two qualified men at headquarters, all the rest of their retainers know nothing about disease and are entirely unfitted for the positions they occupy. I often wonder why farmers do not protest and rise up in arms at the manner they have been treated by the Board, for I am certain the farmers never wanted the Veterinary Department done away with. However, from the last Order which has been issued by the Board, the Sheep Scab Order, I am very glad to see that they are beginning to recognise the necessity of employing the veterinary surgeon a little more than they have done under previous Orders. The Local Authority on receiving notice of an outbreak of sheep scab must call in at once their veterinary inspector, and he must examine not only all suspected sheep but all sheep on that farm, and if one veterinary inspector is not sufficient the Local Authority must appoint additional veterinary inspectors. The only flaw in the new Order to my mind is number five, when it states their experience is that the purely executive duties entrusted to inspectors by a Local Authority are more efficiently and economically performed by the police than by veterinary officers. This may be because a veterinary surgeon cannot be expected to stand all day and see sheep dipped, but I think these police inspectors ought to be under the order and direction of the veterinary surgeon, which they are not. However we must be thankful for small mercies. Had this Order not come out as it has I was going to advise veterinary surgeons to turn their attention to the treatment of fish and learn how to treat an oyster when he is suffering from diarrhœa, lest a member of the Board should become affected with typhoid fever from eating the bivalve. This in passing.

The amalgamation of the New Veterinary College of Edinburgh and the Liverpool University is an accomplished fact, and I sincerely hope that it will be for the elevation and advancement of our profession socially, but I cannot think that a University can turn out a more thoroughly qualified man to practice the art and science of veterinary surgery than a College devoted entirely to that particular science. Certainly the Liverpool University is granted by Government, I think, £5,000 per annum, and all other Universities in a similar ratio according to their size. Manchester, I think, is endowed yearly with £7,000, and the Armstrong College of our own town with £3,000 per annum. If the Government would only endow Veterinary Colleges with sufficient yearly to support a Chair of Research how very much better it would be for the country at large. The Government granted £25,000 for the endowment of the Dublin Veterinary College which I think is working well to be a success, but what more right has the Dublin College to £25,000 than the London, Edinburgh, and Glasgow Colleges? None whatever I think.

I will now draw your attention to the prelminary

examination. I advocated last year in my address that it be made equal to the first class College of Preceptors, but I find that is a very severe examination indeed, and medical men are content to accept a second class in all subjects except one, and that is Euclid, the first three books, which must have first class marks. The papers set for medical and dental students by the College of Preceptors in December last I lay before you, and you will think with me that a youth must be fairly well educated to pass such an examination. I would not have an examination of our own, but select one fully equal to the medical faculty.

In concluding let me say that since I left College in 1876 the science of bacteriology has developed to such an extent that men like myself fully employed daily in practice have not time to attend to it as we should, and we get left behind. I would therefore suggest to you that instead of attending a post graduate course in London, which it is impossible for single-handed busy practitioners to do, that we should have instead of papers and communications at our quarterly meetings a course of lectures on bacteriology and pathology. By having say four such lectures in a condensed form with microscopical slides and describing how all cultures are prepared we should very shortly be up to date again in our pathology. Gentlemen, I thank you for your kind attendance here to-day, and for so patiently listening to my disjointed remarks.

Mr. CRAIK proposed, and Mr. Chivas seconded, a hearty vote of thanks to Mr. Hunter for his address, which was received with acclamation.

Mr. A. GOFTON read an interesting and instructive paper on "Some Diseases of and Injuries to the Foot of the Horse." The discussion which followed pertained principally to the various methods of treatment of canker and quittor, Messrs. Hunter, Chivas, Prof. Dewar, Kilburn, Dudgeon, and Gibson took part.

Mr. GOFTON having replied, the meeting concluded.

The members and friends afterwards dined together. Mr. Hunter again occupied the Chair, and Mr. Dudgeon the vice-chair. The usual loyal and patriotic toasts were duly honoured Those of "The Royal College of Veterinary Surgeons" and "North of England V.M.A." were proposed by Mr. Dudgeon and Prof. Gilchrist, and responded to by Professor Dewar and the President. The proceedings were enlivened by the musical efforts of Messrs. Brownlee and Gibson.

E. R. GIBSON, *Hon. Sec.*

PARASITIC MANGE.

THIRTY-TWO HORSES AFFECTED.—A FINE OF £50.

On March 14th in the Northern Police Court, before Mr. Mahony, John Wallis, trading as John Wallis and Son, carriers, 33 Bachelor's Walk, was summoned by the Corporation for having eleven horses his property affected with parasitic mange, and failing to give the necessary notice. There was a second summons in respect of 21 horses so affected, and a third for removing the animals out of the city to stables at Kimmage.

Mr. Moriarty, K.C. (instructed by Mr. Burke), appeared for the Corporation. Mr. Gerald Byrne defended.

Mr. Watson, Veterinary Inspector under the Corporation, deposed, in answer to Mr. Moriarty, K.C., that towards the end of January he learned that there were 21 horses belonging to Mr. Wallis affected with parasitic mange at Kimmage Road. On the 21st of January he went to the latter place and found the animals there to be affected with the disease, and they evidently had been so affected for some time. From what he learned he, on the 29th of January, went to Empress Place and found Mr. Wallis and Mr. Bradley and the stable-man (Kelly) there. He there inspected 101 horses, and amongst them found 11 affected with the disease, and with reference to them there was no attempt at isolation. Seven were strongly marked with signs of the disease, and four of them had been affected for only a week. He pointed out their condition to Mr. Wallis. The four horses had been put apart from the others by the stable man, Kelly. When he drew Kelly's attention to the seven others he said he did not know they were affected. When he spoke to Mr. Wallis as to the necessity for notification he said he had been going about the country very much, and had been kept very busy. He added that the horses had been isolated at North Clarence Street, from which they were brought to Kimmage Road for more rigid isolation. To so transfer them they would have to go right across the city.

Is this parasitic mange infectious and contagious?—Yes, highly so. Witness said that Mr. Wallis met him very fairly. The horses belonging to the firm were used for general carrier purposes throughout the city.

Cross-examined by Mr. Gerald Byrne: The defendant had already been fined 1s. for the offence in respect of the County Dublin.

Mr. Byrne said that he admitted the offence in so far as the transfer of the horses was concerned, and for that a nominal fine had already been imposed.

Mr. Bradly, V.S., in reply to Mr. Byrne, said that every possible precaution was taken by Mr. Wallis to prevent the possibility of the infection spreading, and the moment the disease was discovered no effort was spared to isolate and apply the best treatment.

Mr. Mahony said he was quite sure that the moment Mr. Bradley was brought on the scene the best precautions possible were taken.

Mr. Moriarty contended that so far as the removal of the twenty-one horses to Kimmage was concerned the offence was clearly established. It was practically admitted that the necessary notice was not given in the manner prescribed, and in the case of some of the horses the offence was of great gravity.

Mr. Mahony: Do you take a serious view of the transit through the city?

Mr. Moriarty: No so serious because of the fact that it was done *bona fide*, and I only ask for a nominal penalty.

Mr. Watson, V.S., in reply to Mr. Mahony, said that at the time of the transit the animals had been dressed and treated so as to reduce the infection to a minimum.

Mr. Mahony said he regarded the case as one of the greatest importance. The action of the defendant might have had the most far-reaching and serious effects. The offence was, in truth, of the utmost gravity. It might have resulted in the impoverishing of an already impoverished and most deserving class—the car and cabmen of Dublin. It might have paralysed the traffic of the city and destroyed for the time being the business of carriers and of large and small establishments. He could not see his way to impose a smaller penalty than £50.

Mr. Moriarty: I have to ask your worship for costs.

Mr. Mahony: Yes, with costs.—*Freemans Journal*, Dublin.

Liverpool School of Tropical Medicine.

The Committee of the Liverpool School of Tropical Medicine, of which Sir Alfred Jones is the President, has just issued a report on the researches of the last expedition to Sierra Leone. This expedition consisted of Professor Boyce (Professor of Pathology in the University of Liverpool and Dean of the Liverpool School of Tropical Medicine), Dr. Arthur Evans, and Dr. H. Herbert Clarke. As only a very limited time was at the disposal of Professor Boyce's expedition this winter, the members confined themselves to a comparative study of the sanitation and anti-malarial measures in actual practice in Bathurst, Konakry, and Freetown.—*African World.*

DISEASES OF ANIMALS ACTS 1894 TO 1903. SUMMARY OF RETURNS.

Period.		Anthrax.		Foot-and-Mouth Disease.		Glanders (including Farcy)		Rabies. Cases Confirmed.		Sheep Scab.	Swine Fever.	
		Out-breaks	Ani-mals.	Out-breaks	Ani-mals.	Out-breaks	Ani-mals.	Dogs.	Other	Out-breaks	Out-breaks.	Slaugh-tered *
GT. BRITAIN. Week ended Apr. 1		27	38	..	..	20	44	..	..	13	16	61
Corresponding week in	1904 ..	19	22	..	..	22	38	..	..	31	21	81
	1903 ..	16	23	..	..	27	36	..	..	26	35	175
	1902 ..	15	17	1	30	19	34	..	..	26	24	122
Total for 13 weeks, 1905		278	421	..	..	287	566	..	..	547	155	755
Corresponding period in	1904 ..	270	370	..	..	369	717	..	..	943	320	1870
	1903 ..	204	323	..	..	303	538	..	..	1004	353	1634
	1902 ..	202	357	1	30	285	543	7	..	941	399	2122
IRELAND. Week ended Mar. 25		..	..	..	..	1	6	..	..	4	..	..
Corresponding Week in	1904 ..	1	1	..	..	..	8	..	..	9	4	23
	1903 ..	..	..	..	..	..	..	..	..	19	2	1
	1902 ..	..	..	..	..	..	..	..	..	17	2	62
Total for 12 weeks, 1905		1	1	..	..	9	23	..	..	178	5	196
Corresponding period in	1904 ..	2	2	..	..	2	17	..	..	284	28	654
	1903 ..	..	..	..	..	1	2	..	..	328	10	372
	1902 ..	..	..	..	..	3	8	..	..	344	35	590

Board of Agriculture and Fisheries, April 4. 1905.

Epizootic Lymphangitis, Week ending Jan. 14, 2 cases; Feb. 25, 2 cases; March 25, 10 cases.

Department of Agriculture and Technical Instruction for Ireland, (Castle Street), Dublin, Mar. 30, 1905.

NOTE.—The figures for the Current Year are approximate only. * As Diseased or Exposed to Infection.

ANTHRAX IN CATTLE.

The Lanark County Council have issued a report of their medical officer, Dr. J. T. Wilson, on anthrax, and the reports of veterinary inspections are appended to it.

Lanarkshire is one of the counties in which the outbreaks of anthrax are least frequent, and in which the disorder does not affect sheep. Although it is not expressly stated, infection appears to be by the alimentary tract. One of the veterinary inspectors is of opinion that foreign foodstuffs are responsible for the disease, but the occurrence of anthrax on farms where no such food is used is sufficient proof that they are not the sole source of infection. Dr. Wilson has been unable, indeed, to confirm the observations of those who find the organism in specimens of imported food, even that used by animals actually affected.

The following points, he says, seem to be established:—

1. That a buried carcase is innocuous. The organisms rapidly degenerate, and by the fifth day are unrecognisable; only under most exceptional circumstances does sporulation occur. Cremation is therefore unnecessary.

2. The discharges from an animal sick of the disease, and the shed blood, can and do infect the surroundings and spread the disease to other animals grazing in the same meadow, or feeding from the same stall.

3. The recognition of non-fatal cases of anthrax in cattle is difficult; indeed a diagnosis is seldom if ever made in the absence of post-mortem evidence from a fatal case.

4. The flesh of an animal dead of anthrax may, as a rule, be consumed with impunity. The case investigated and reported by Dr. Chalmers to the Glasgow Corporation, however, shows that such meat is not above suspicion.

5. Vaccination, where it has been carried out in Lanark, has so far met with no failure.

6. Examination of the blood of suspected cases *intra vitam* failed to reveal the bacillus, even where the animal ultimately died of anthrax.

Dr. Wilson takes exception to the suggestion made in a recent issue of *The British Medical Journal*, that anthrax should be brought under the single control of the Board of Agriculture; nevertheless he proposes that body as the authority best suited to undertake "some original research and inquiry bearing upon the cause and prevention of anthrax throughout Great Britain and Ireland."—*B.M.J.*

Rabies Reviving in France.

In the West of France there is a serious recrudescence of rabies, and threatening symptoms are not wanting in Paris itself—solely, however, says a contemporary, attributable to the negligence—culpable, as it might almost be termed, of the police to carry on the regulations against dogs at large without identification collars. The number of stray and apparently ownerless dogs at large in the streets is again becoming noticeable. The number of patients daily treated for prevention of rabies at the Pasteur Institute in Paris is less than half what it was three years ago, but this is due to the opening of five provincial institutes.—*The Western Evening Herald*, Plymouth.

The London School of Tropical Medicine.

The London School of Tropical Medicine is an adjunct of the Seamen's Hospital, close to the Royal Albert Docks.

The School owes its origin to Mr. Joseph Chamberlain, when he was Colonial Secretary. With the initial purpose of affording instruction to medical officers in the service of the Colonial office, he invited the commitee of management of the Seamen's Hospital Society to establish a school in connection with their hospital, and, in accepting this invitatior, it was decided to broaden the scope of the school, and confer a benefit on medical science at large by throwing it open to all medical graduates who might wish to avail themselves of its exceptional facilities for the study of this particular branch of medicine.

The school stands next to the Society's branch hospital, at the gate of the Royal Albert Docks, and is thus particularly favoured by its position for accomplishing its objects. Ships arrive constantly from all parts of the world, having on board natives of every country, and and bringing a representative collection of tropical diseases.

In addition to its important function as a centre of instruction, the school has another of equal importance as a home of original research. Tropical medicine, as a definite branch of medical science, is scarcely more than adolescent. The tragic mystery of sleeping sickness has here been in part illuminated, and two lepers are now living under observation at the hospital. One of these unfortunate men, whose name, for obvious reasons, is withheld, was a missionary till the scourge incapacitated him. In the course of a conversation with one of our representatives, Dr. G. C. Low, the superintendent and medical tutor of the school, expressed the disquieting opinion that leprosy in England is not so rare as one is accustomed to believe. According to him, there are several lepers walking about London; but he added that leprosy was not more to be feared than tubercle, with which one is liable to come into contact in any tramcar.

The University of Cambridge now grants a diploma for tropical medicine, while the University of London has made it an optional subject in the examination for the degree of M.D. This, of course, means that most of those who avail themselves of these concessions prosecute their studies at the school and hospital. The hospital is, indeed, the school's best asset. Cases of blackwater fever, various forms of malaria, yellow fever, kala azar, sleeping sickness, dengue, plague, cholera, sprue, dysentery, and a variety of other afflictions, are constantly present in its wards, where the fifty beds contain as wide a difference of illnesses as any hospital in the world. During the visit of our representative, a Chinaman with a cardiac trouble lay next a Swede, while Lascars, Hindus, and English were lying in rows. For the more dangerous diseases, like plague and leprosy, sufficient provision is made to secure isolation and minimise the risk of contagion.—*Standard.*

Cruelty Prosecution at Wolverhampton.

"Squabble Among Vets."

At the County Petty Sessions at Wolverhampton, on Monday, March 20th, before Messrs. A. C. Twentyman, C. T. Mander, and T. B. Cope, John Venville, funeral superintendent at the Wolverhampton Workhouse at New Cross, was summoned by Inspector Wilkie, of the R.S.P.C.A., for cruelty to a mare by causing it to be worked in an unfit state, and William Hughes, a carter and inmate of the Wolverhampton Workhouse, was charged with working the horse in an unfit state. Mr. A. Turton prosecuted, and Mr. R. A. Willcock defended.

P.C. Owens said that on December 28th last he saw Hughes in charge of a bay mare, which was harnessed to a four-wheeled van belonging to the Wolverhampton Board of Guardians, at Codsall. The mare was "exceedingly lame" in the forelegs, and was sweating. He had the mare taken out and put in a stable. Hughes remarked that he had been sent by Venville to take 1,000 bundles of firewood to Codsall. He knew the mare was very lame, and was not surprised at being stopped.

John Richards, of Codsall, corroborated the evidence of the policeman, and

Inspector Wilkie said that the next day he found the mare in the yard of Mr. J. H. Bates, veterinary surgeon. The mare was in fairly good condition, but lame from ringbone and dropped sole in one foreleg, and dropped sole in the other foreleg. When he saw Venville, the latter said he was responsible for the working of the mare, and had control of the horses at the workhouse under the master.

P.S. Newey stated that a month before December 28th he saw the mare "going very groggy."

Mr. J. E. Cartwright, veterinary surgeon, Wolverhampton, said that he saw the mare on December 29th, on the premises of Mr. Bates. The mare was lame in both forelegs from fever in the feet. The animal's shoes had been removed. He asked to be showed the shoes twice, but was refused.

Mr. Willcock remarked that he had been instructed by the Wolverhampton Board of Guardians to defend the defendants, because, after investigation, the Guardians did not think the men had been guilty of cruelty under the Act. The horse started from the workhouse perfectly right, and he wished to point out that the defendants could gain nothing whatever by cruelty to a horse, and had other horses to work if they desired them.

Venville gave evidence that the mare had been standing in the stable for several days, and left the workhouse for Codsall in good condition.

An inmate of the workhouse named Ebor Marston said that he had been with the mare continually for two years, and passed police officers, but no complaint had ever been made about it.

William Simpson, the superintendent of the casual ward, said that he saw the mare leave the workhouse, and saw no lameness.

Mr. J. H. Bates, veterinary surgeon, said he examined the mare on December 28th at Codsall. The animal had fever in the feet, and it was the usual thing for an animal suffering from that to start out without any sign of lameness. The mare had been at work since, and was fit to work on the road now. The witness was cross-examined by Mr. Turton as to why he did not allow a brother professional man to see the animal's shoes. Witness said that he considered the shoes "a good witness for himself." Witness suggested to the Chairman and Clerk to the Guardians that they should not show the shoes, and the Chairman told him not to show them. Witness said to them, "The shoes are bad. Shall you show them?" The shoes did not affect the fever of the feet, but they were caked with dirt.

Mr. Twentyman said that he thought that the refusal to show the shoes was not straightforward.

Mr. Willcock said that the question of the shoes was a side issue, and nothing to do with the defendants. He offered to call the Clerk to the Guardians to explain the matter, but Mr. Twentyman said that they could not hear the Clerk.

Mr. Edward Beddard, veterinary surgeon, said that he had examined the mare and found it suffering from fever in the feet. That came on after a journey, and there was no indication she had had it before. In reply

to Mr. Turton, witness said that he considered it very foolish for one veterinary surgeon to refuse another to see an animal's shoes.

Mr. Twentyman said that the magistrates considered the case proved. As Hughes worked under orders he would be excused, Venville would be fined 10s. and costs.

Inspector Wilkie asked for costs to include the fee of the prosecuting solicitor and the veterinary surgeon called for the prosecution.

Mr. Twentyman said that there had been "a squabble among the vets." in the case, and the less they said about the matter the better. (Laughter.)

Mr. Turton: If the ratepayers pay?

The Clerk to the Guardians said that the ratepayers could not pay. Venville had to pay his own fine.

The total fine and costs on Venville amounted to £2 6s. 6d. He was allowed the day to pay the money.—*The Midland Evening News.*

PRESENTATION TO MR. A. C. COPE.

The Royal College of Veterinary Surgeons was the scene of an interesting ceremony on Thursday afternoon, when Mr. Alexander Curtis Cope was the recipient, on his retirement, of much solid evidence of the esteem in which he is held by his colleagues and staff at the Board of Agriculture, and of their appreciation of his work.

Mr. J. F. Simpson presided, and amongst those present were the following gentlemen: Sir Thomas Elliott, K.C.B., Sir Jacob Wilson, Mr. S. Stockman (Mr. Cope's successor), Messrs. Arthur S. Auger, G. A. Banham, P. G. Bond, J. J. Bell, J. Buscomb, A. A. Cope, J. Fraser, T. B. Goodall, W. A. Hancock, G. B. Holden, E. C. Howard, Percy S. Howard, H. Jarvis, S. Locke, H. V. Mossman, Wood Page, J. G. Parr, T. V. Pettifer, D. Pugh, W. W. Smart, Trevor Spencer, John Ward, and W. A. Wartnaby. Professors McI. McCall and Dewar, and Mr. A. W. Hill (Secretary of the Royal College).

The testimonial was divided into two portions, one consisting of a large silver tray and two silver salvers subscribed for by the permanent and temporary inspectors attached to the Board of Agriculture, and the other, composed of a handsome silver Tantalus or lock-up liquor frame, a large silver bowl, two biscuit or cake baskets, and four large and two small silver vases for flowers, making a complete outfit for table decoration, subscribed for by the local veterinary inspectors of the Board of Agriculture throughout the country. The latter gentlemen also presented Mrs. Cope with a beautiful diamond and turquoise pendant.

The whole of the silver was displayed upon a table in the Council Room and prettily decorated with tulips and daffodils presented by Mr. J. F. Simpson.

Mr. J. F. SIMPSON, in making the presentation on behalf of the local veterinary inspectors, said: Gentlemen, in matters of the kind we are about to discuss it is necessary for somebody to take a lead. Unfortunately, owing to the long distance which all local veterinary inspectors live from this centre, I have not had the opportunity of consulting them as much as I should have wished. I have run considerable risk, I think, in acting as it were "off my own bat," but I trust that in the end not very much blame will be attached to me for the course which I have adopted (Hear, hear.)

Mr. Cope has asked me to make the presentation. I would far rather that an important man in the profession, or some important personage at any rate, should do this very pleasing duty, but inasmuch as I have had nearly everything to do with the inception and work of the testimonial, Mr. Cope felt that probably I should be able to speak with a better knowledge than those who have most kindly sent subscriptions but who have not been in touch with the details.

It occurred to a few of us that we should be sorry Mr. Cope should sever his connection with the Board of Agriculture, where he has been for so many years, without the local veterinary inspectors having the opportunity of giving some expression in words, and some more solid token, of our appreciation of the services that he has rendered not only to the Board of Agriculture but to the profession. (Hear, hear). For 32 years Mr. Cope has been in the service of the Government, and I feel sure that all will agree with me—all those who have been in as close touch as I have been with Mr. Cope in connection with his professional duties—that no public servant ever left a department better respected and with kindlier wishes from those to whom he is known. (Cheers.) We have reason, I feel sure, to be very thankful to Mr. Cope for the many services he has rendered to the veterinary profession. (Hear, hear.) Mr. Long when he was President of the Board of Agriculture was good enough to give me an interview in connection with the position the profession held at the Department of Agriculture, and he then assured me that no change was ever made in connection with the profession without his always consulting the Chief Veterinary Officer, Mr. Cope. (Hear, hear.) I think that was a proof that the President of that day thought well of the services of Mr. Cope and of his judgment, and I have very little doubt that the successors to Mr. Long have, in their turn, consulted him as confidentially and as fully as did Mr. Long.

It was exceedingly difficult to know how to select a suitable present for a gentleman who has lived so long and so happily, and who therefore must have received in the course of his life many presents from his various friends. We might have duplicated something Mr. Cope already had in his possession, and therefore I thought it would be in accordance with your wishes if I consulted him as to what he would like.

Before closing my remarks, I should like to say that we are grateful to Sir Thomas Elliott for his presence here to-day. Sir Thomas Elliott, as the Secretary of the Board of Agriculture and Fisheries, has, like Mr. Cope, been a good friend to us. (Hear, hear.) There have been many changes of late, we know perfectly well—speaking for myself as one of you—that I am not selected as a local veterinary inspector for my special abilities, but simply because I am geographically situated to suit the convenience of the Board of Agriculture. Therefore, although we regret that the whole of the profession cannot be honoured by these appointments, still it must be looked upon certainly as a move in the right direction that the profession should be recognised if only by the selection of a few. To Sir Thomas Elliott we give our very sincere thanks. (Hear, hear.) We also give our sincere thanks to Sir Jacob Wilson, who although not intimately connected with the animals department is, I know, a true friend to the veterinary profession—(bear, hear)—and we are glad that he is here to represent agriculture to-day. I know he has come at inconvenience to himself, and it is one more evidence of the fact I have mentioned that Sir Jacob is deeply interested in the doings of the veterinary profession.

Now, Mr. Cope, on behalf of the subscribers here present, and the many who are unable to come, but whose letters I have before me for your perusal—all unanimous in their expressions of good will towards you and regret at their inability to be present—may I ask you to accept from us this collection of silver plate and this address. The address is as follows:

"To Alexander Curtis Cope, Esq., M.R.C.V.S., Dear Sir, Upon your retirement from the position of Chief Veterinary Officer to the Board of Agriculture, the undersigned local veterinary inspectors of the Board are desirous that we should give expression to our admiration of the manner in which your responsible duties have been

performed during the many years you have been our chief, and our appreciation of your invariable courtesy shown us on those occasions when we have sought your superior judgment and friendly advice. We ask the acceptance of Mrs. Cope and yourself of the accompanying silver table ornaments and jewelled pendant and chain, with our assurance that you are carrying into retirement our sincere wishes for your long life, health, and happiness." A long list of signatures follows which I need not read (cheers).

Mr. W. W. SMART, C.I.S.O., in making the presentation on behalf of the permanent and temporary inspectors attached to the Board, said: I am in a similar position to Mr. Simpson as being the representative of the veterinary staff of the Board of Agriculture. I have not been specially commissioned to present this testimonial, but I have assumed the duty. Our inspectors are very widely distributed, and unfortunately there are very few of them here to-day, and as I have acted as Secretary of this movement I will assume the pleasurable duty of making the presentation to Mr. Cope as some little mark of our esteem. On behalf of the veterinary staff of the Board of Agriculture I beg, sir, your acceptance of this silver plate, consisting of a silver tray and two silver salvers, together with a letter which I will read:

"To A. C. Cope, Esq., M.R.C.V.S., Chief Veterinary Officer of the Board of Agriculture and Fisheries. Dear Sir, I have very much pleasure in asking you to accept the accompanying silver tea tray and pair of salvers as a token of our esteem and friendship, and as a memento of the cordial relations which have always existed between yourself and your professional colleagues on the staff of the Board of Agriculture and Fisheries. We recognise that in you we had not only a kind and considerate chief, but also a true friend, with whom we keenly regret to part, and we assure you that into your well earned retirement you carry our best heartfelt wishes for many years of health and happiness."

The inspectors of the Board of Agriculture are, as you know, but a very small community, and consequently our offering perhaps lacks some of the magnificence the occasion may deserve, and I feel it will be of interest to you to know that it has been contributed to by every member of the veterinary staff. (Hear, hear.) As one of the oldest veterinarians now in the service of the Board of Agriculture, I must add just a few words to emphasise the great esteem in which we always have held you and to express the very great regret with which we part. In Mr. Cope we had a chief who was always accessible, always sympathetic with any of our little grievances, and who was always ready and willing to give us not only his professional advice but from his ripe experience to give us many hints as to our conduct in the discharge of our duties towards the general public, assistance which others as well as myself have found very valuable. We who have been associated with Mr. Cope know the amount of work he has done for the stock-owners of this country, work that has always been done quietly, unostentaciously, and with an entire absence of self-advertisement, but none the less efficiently done. (Cheers.) We are are delighted that notwithstanding the severe illness of three years ago Mr. has recovered his robust health, and we trust he may be spared very many years to enjoy his well earned retirement. (Cheers.)

Mr. A. C. COPE, in rising to respond, was received with much cheering. He said: After a long public position such as that which I have held I can assure you that it is a matter of intense pleasure and gratification to me and mine to think I should have discharged my duties towards you and towards the profession as a whole in such a manner as to become worthy of these beautiful presents which you have given me to-day. The present itself has been very much increased as regards its usefulness and value by the kind manner in which I have been permitted to select the articles which I wanted.

The other gifts which I have received from my friends with whom I have been so intimately and so long acquainted at the office, and from whom it is really great grief for me to part—but I do not mean to part from them as friends (cheers)—are gifts of a most useful character, and were also selected by my wife and myself. So far as my recollection goes, I might almost say confidently that there is no other man in this profession who has ever at any time received such beautiful presents as those which are given me to-day, and my gratification is such that I can hardly find words to express my feelings in the matter. (Cheers).

Now that I have retired from the Board of Agriculture—I have not retired from the profession (cheers)—my hope is that I shall be of some service to the profession, and that my long experience will enable me to help every section in the profession if opportunity offers. In the first instance I hold the position of Governor of our College, and therefore I shall have an opportunity of taking an interest in the education of the rising generation. (Hear, hear). I am very well known, and, although I say so, I think I am very much respected by most of the leading agricultural societies. (Hear, hear). The only enemies I have ever made in my life, I believe, have been the foreign Governments, they wish I had been dead years ago. (Laughter). When I joined the Privy Council Office in 1873 we used to import cattle from every country in Europe, but by a gradual elimination, on finding out that they were sending us disease, the result of my work and my predecessor's work is that the whole of Europe is prohibited at the present moment, and therefore you may imagine that I have no friends in the foreign Governments. (Laughter).

Gentlemen, I have to thank you very much indeed for attending here in such numbers; the assembly is much greater than I expected. I can assure you that so long as I live, and so long as my son lives—who no doubt some day will take the lot (laughter)—so long certainly as I live I shall not be able to forget the 6th of April, 1905 (Cheers).

The CHAIRMAN: I am very sorry that I omitted to emphasise that particular part of the present that relates to Mrs. Cope. We ask you, Mr. Cope, to take this pendant to Mrs. Cope with our most sincere regards.

Mr. A. C. COPE: I will, sir, with pleasure.

The CHAIRMAN: Another of the objects of the attendance here to-day was to have the pleasure of meeting Mr. Stockman.

Mr. W. W. SMART: Although not specially commissioned to do it, I feel that on behalf of the veterinary staff of the Board of Agriculture I ought to take the opportunity of extending a greeting to Mr. Stockman. Mr. Stockman's reputation as an up-to-date and scientific veterinary surgeon is a guarantee of the efficient manner in which the duties of the Board will be performed, and the fact that a few short weeks ago, before leaving South Africa, he was the recipient of offerings somewhat similar to those we have given to Mr. Cope to-day, is a guarantee that he is a gentleman with whom the staff will be able to work amicably. I think there is not the slightest doubt that those cordial relations which have been so conspicuous a feature between Mr. Cope and his staff will be continued without a break in the case of Mr. Stockman. On behalf of the veterinary staff of the Board of Agriculture I beg to assure you, Mr. Stockman, of our hearty co-operation and assistance, and I trust you will have the good fortune and the good health to occupy the position for as long a period as your predecessor has done. (Cheers.)

Mr. S. STOCKMAN: I should like in a few words to thank you all, and you, sir, in particular, for the opportunity you have given me of meeting my colleagues and making their acquaintance. I know that I have to suc-

ceed and follow in the steps of a man who has established a considerable reputation not only for professional knowledge but also for goodness of heart. (Hear, hear). It has been a great pleasure to witness this presentation to my predecessor, and to hear from Mr. Smart that he hopes I shall live as long in office as Mr. Cope—I hope so myself! (Laughter and hear, hear). I thank you all, gentlemen, for the kind way in which you have received me, and especially Mr. Simpson for suggesting this opportunity of meeting my colleagues.

At the conclusion of the proceedings the gentlemen present were personally introduced to Mr. Stockman by Mr. Cope.

On the motion of Mr. Parr, a hearty vote of thanks was accorded to Mr. Simpson for his work in connection with the testimonial, and for the manner in which he had presided over the meeting.

Mr. SIMPSON, in responding, said: I assure you I have worked with a certain amount of anxiety lest I might be thought to be taking too much on myself, but I appreciated the difficulties of getting a Committee together from amougst gentlemen who are practicing from Land's End to John o' Groats, and from the extreme east to the west. It has given me very great pleasure indeed to work for you and for my old friend, Mr. Cope.

Epizootic Lymphangitis.

Sir,—Few people are aware that we are threatened with a calamity which may cripple one of our best and most interesting industries.

Through some stupid blunder or petty display of economy a number of battery horses after the South African war were sent to Waterford suffering from the most malignant of known horse diseases called "Epizootic lymphangitis,"

From the barracks it fixed itself in some of the Waterford stables and through the county, and several people, including the Marquis of Waterford, have destroyed some valuable horses, as, so far as we know, there is no cure for this dreadful disease.

No time should be lost in insisting that the Government should carry out a rigid inspection of the infected districts, destroy all horses suffering from the disease, grant liberal compensation, and try and make amends for their own blunder. Otherwise it may cost the country hundreds of thousands. I have just heard that a Waterford farmer found the disease in his stable, and disposed of all his horses at a recent fair.—Yours, etc.

W. P. HANLY.

Lanespark, Thurles, 1st April.—*Irish Times.*

Action for False Representation.

GREENALL *v.* TATEM.—This was an action brought by Sir Gilbert Greenall against Mr. Tatem, a shipowner, of Cardiff, for false representation in the sale to him of a mare, Mell Valley Princess, for £500.

Mr. Shee, K.C., and Mr. Ashton appeared for the plaintiff; and Mr. Eldon Bankes, K.C., and Mr. Bailhache for the defendaut.

It appeared that the pony had been bought for £700 by the defendant in 1902 and successfully exhibited in London and elsewhere, and in 1904, after some negotiations, the plaintiff agreed to give £500 for her, subject to a veterinary examination. On that examination the pony was found to be in rather poor condition, and it was alleged by the plaintiff that the defendant told the veterinary surgeon that its state was due to the negligence of his former stud groom, which had caused it to slip its foal several months previously. The surgeon recommended that the pony should be kept under observation for a week before purchasing it; but the plaintiff bought it immediately, and within 24 hours discovered that it was suffering from a confirmed habit of wind-sucking. He accordingly wired the defendant that he could not keep it, and offered to return it. The pony was afterwards, by the direction of the plaintiff, put up to auction as a wind-sucker and bought by the defendant for £250, and was now said to be in as good condition as ever.

Evidence was called for the plaintiff that at the time of his purchase the defendant was aware that the pony was addicted to wind-sucking, and fraudulently concealed that fact which he knew to be material; that was denied by the defendant and his witnessses.

The jury returned a verdict for the defendant, for whom judgment was entered.—*The Times.*

Personal.

Mr. W. E. LIVOCK'S, M.R.C.V.S., chestnut horse, "Stowmarket 1st" won in a canter in Point-to-point race on March 31st at Cockfield, Bury St. Edmunds for hunters regularly hunted with any pack of hounds in Norfolk, Suffolk, Cambridgeshire, or Essex. 3½ miles. 8 ran.

ARMY VETERINARY DEPARTMENT.

Extract from *London Gazette*,

WAR OFFICE, PALL MALL, April 4.

Major James Joseph Philips is placed on retired pay. Dated April 1st, 1905.

OBITUARY.

JOSEPH HEWITT WELSBY, F.R.C.V.S., Liverpool.
Graduated, Edin.: May, 1859.

The veterinary profession in Liverpool and district has lost a very valuable member through the death of Mr. Joseph H. Welsby, F.R.C.V.S., which took place rather suddenly at his residence Hayman's Green, West Derby. Mr. Welsby, who was 70 years of age, had been in failing health for a considerable time, his condition having become more serious during the past five or six weeks. His demise, however, occurred somewhat unexpectedly. He leaves a widow and a son, who is in practice as a veterinary surgeon in London. Mr. Welsby came from Sutton (St. Helens) to Liverpool over 40 years ago, and had been in practice in this city ever since, being one of the oldest veterinary surgeons in this district. A smart practitioner, he had built up a very extensive business, and his skill was greatly valued, particularly among the horse-owning gentry of Liverpool and neighbourhood, his practice being mainly centred in this direction. By those in the same profession, too, he was highly respected, for he was one who always maintained the dignity of this important calling, whilst his genial nature enhanced his popularity.—*Liverpool Courier.*

The funeral took place at St. John's Churchyard, Knotty Ash, in the presence of a large gathering of mourners. The Rev. F. J. Powell was the officiating clergyman, and the chief mourners were Mr. J. Randolph Welsby (son), Mr. George Welsby and Mr. Alfred Welsby (brothers), Mr. H. L. Fairer (son-in-law), Mr. R. Ewart, Mr. H. Kirkconnell, and Mr. E. Kitchen (nephews); Messrs. J. Park and A. Walker. Amongst the general body of mourners were Messrs. Stafford Jackson, Richard Reynolds, J. Wilson, A. W. Middlehurst, J. Sumner, H. Sumner, G. M. Davey, L. Butters, W. G. Dixon, J. Smith, A. Duckworth (representing Mr. T. Eaton-Jones), and Arthur Leather.—*Liverpool Daily Post.*

CORRESPONDENCE.

PROSECUTION FOR SHEEP-SCAB.

Sir,

I am peculiarly interested in the case reported in *The Record* of the 1st inst., and quoted from *The Whitehaven Free Press*, as I have had on two occasions a similar experience to that of Mr. Litt.

In my humble opinion the evidence tendered by Prof. W. O. Williams neither does credit to himself nor to the profession.

Honest differences of opinion are bound to occur occasionally, *e.g.*, in cases of unsoundness, etc.; but when it comes to a question of sheep-scab—a disease due to a parasite, and that parasite actually found on the animal, where does the doubt come in? I venture to assert that the positive evidence of the professional man who discovers acari on a certain date is a great deal stronger than that of the other, who says he *cannot* find them some time afterwards.

There are a number of reasons why one might *not* find acari in a case that was really affected with scab a week or ten days previously, when the sheep had been treated in the meantime in the manner they had been in the case under notice. In some instances these acari take some searching for, but their discovery absolutely proves the presence of the disease. Now, is it not a pity that professional men, summoned to give evidence for the defence, are not manly enough to admit the possibility of the existence of acari a short time previously, although they had failed to find them at the time of examination? The quibbling as to the colour of the dried scab is sheer nonsense, as the colour, of course, depends upon the various circumstances of each case. Another fact that ought not to be lost sight of is, that most dips contain an alkali, and this tends to dissolve the incrustation. By the way, you do not get an incrustation even in every case; it may be but small centres not larger than a threepenny piece, and if a sheep is dipped before it has had time to damage the fleece, these centres take some searching for a few days after dipping.

Prof. Williams says that these sheep had a large quantity of "yolk," bearing the appearance of scab. I say that this natural secretion has not the appearance of scab, and to suggest that this can give rise to any difference of opinion amongst, or mislead experienced professional men is absurd.

About twelve months ago the Denbighshire Quarter Sessions decided that the certificate of a Veterinary Inspector shall be conclusive evidence of the disease certified, and it would be well for all Inspectors to bear this in mind, so as to put an end to this disagreeable position of being opposed on oath by fellow professionals, in cases where really there are no genuine grounds of defence, as in this instance.

The New Sheep Scab Order comes into force to-day, and to some degree it will increase both the duties and the responsibilities of Inspectors in the districts where the disease exists. When the different conditions under which we are called upon to examine sheep, are taken into consideration, our position is a sufficiently difficult and delicate one, and deserving of the support of our fellow practitioners, even of our professed teachers. J. H. Wynne, F.R.C.V.S.

Denbigh, April 3rd.

HORSE FEEDING.

Sir,

I hardly think at the present time that anything much more important than the subject of Professor Woodruff's paper could be placed before the veterinary profession. Certainly in the large towns and cities the veterinary surgeon should be as fully conversant as possible with this subject. Motor cars and electric traction are displacing the horse to some extent, although I am an optimist in the matter, and remember the words of John Bright when referring to Britain and Agriculture, and frequently in the press we now see comparisons made between the cost of depreciation of motor cars and of horses. In comparing an animal with a machine we shall never under ordinary conditions of work alter much the depreciation item in our subjects (inexact as that depreciation item no doubt frequently is). With a machine improvements arising frequently in the fitting and mechanical appliances of motor cars will doubtless tend to make them cheaper as years go on. If they become cheaper they will doubtless become more numerous and more competitive with the horse. Hence the importance of looking for economy without sacrificing efficiency in horse matters. Perhaps in the matter of feeding we have room for the most scope in the direction of economy.

I believe that maize has been used as a feeding stuff for horses in England and Scotland for many years. I well remember 20 cart horses at home being fed with a proportion of crushed maize in their food for many years, even as far back as 1885. The proportion was just about what Mr. Rutherford suggests as being safe. The horses did well and looked well notwithstanding hard work coal carting and lurry hauling in a hilly district. There was no frequent or abnormal occurrence of colic. I must say, however, that I have been in many parts of England where people seemed to possess no knowledge of the feeding value of maize, and certainly never used it.

To upset all theory, I knew a gentleman who fed his horses on whole maize and bran and long hay for years, and they worked well until their livers got out of order. I do not think we can ever get as exactly scientific as the medical profession in this matter of feeding, because we can never become as intimately acquainted with the temperaments and constitutions of our patients as a doctor.

If, however, we see a number of horses doing well, lasting well, and working well on economical feeding with a certain diet we are entitled from such experience to express a very fair and reasonable judgement in the matter, and also nowadays a valuable one.

I am totally opposed to the cooking or steaming of food for horses. It has a bad effect on the digestive juices, the nutritive value of the food, and the tissues of the organs with which it comes in contact.—Yours truly,

G. Mayall.

BLACKLEGINE.

Sir,

I have often wondered why so few have recorded their experience in your paper of the use of blacklegine as a preventative of blackleg, and personally took no news to be good news.

On March 14th of this year I vaccinated 28 calves of various ages, three having previously died on the same farm about ten days apart. On the 19th one more died, and on the 31st another followed suit. I should be glad to learn experiences of others.

Wm. T. D. Broad, M.R.C.V.S.

Marlborough, April 4th.

SAD CASE.

Dear Sir,

I herewith acknowledge other amounts in response to appeal. *Bis dat qui cito dat.* I shall soon close list, but I am sure many more hearts will be moved to give to their afflicted brother.—Yours faithfully,

Keogh Kempston (Rector.)

The Rectory, Roscommon, April 5.

	£	s.	d.
George Newsom	1	1	0
S. A. Winkup		5	0
George J. Harvey (Cyprus)	1	0	0
Profs. and students R.V.Coll., Ireland	12	1	0
Thos. Aubrey		10	6

Communications and Papers received.—Dr. E. Rátz, Messrs. G. H. Locke, Jas. Forbes, G. Mayall, G. H. Hunt, G. J. Harvey, J. H. Parker, F. J. Taylor, J. R. U. Dewar, W. A. Locks, E. R. Gibson.

Dicks' London Street Guide, The Whitehaven Free Press, The Midland Evening News, West Cumberland Times. [April 1.

Messrs. W. T. D. Broad, W. E. Livock, J. H. Wynne, J. Toms, D. Crabb. Maj. J. A. Meredith.

The Daily Mirror, Irish Times, The Liverpool Courier, The Western Evening Herald, Yorkshire Post. [April 8.